

**REMARKS**

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for indicating that claims 3-6 contain allowable subject matter.

**Disposition of Claims**

Claims 1-8 are pending in this application. Claim 2 has been withdrawn from consideration. Claims 1 and 7 are independent. The remaining claims depend, directly or indirectly, from claims 1 and 7. Claims 1 and 7 have been amended by way of this reply. No new matter has been added.

**Objections**

Claims 3-6 are objected to as being dependent upon a rejected base claim. Claim 1, upon which claims 3-6 depend from, has been amended in this reply. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

**Double Patenting**

Claims 1, 7, and 8 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of U.S. Patent No. 6,851,508.

Pursuant to 37 C.F.R. §3.73(b), the undersigned encloses herewith a terminal disclaimer with respect to the application above, rendering this rejection moot. Accordingly, withdrawal of the double patenting rejection is respectfully requested.

**Rejections under 35 U.S.C. § 102**

Claims 1, 7, and 8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,971,094, issued to Joshita (“Joshita”). Claims 1 and 7 have been amended in this reply to clarify the present invention recited. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

Claim 1, as amended, recites a motor-operated power steering device that includes a ball screw mechanism having a ball screw nut and a ball screw shaft connected to a steering mechanism, a steering shaft to which a steering force is inputted, a torque sensor for detecting a steering torque generated on the steering shaft, a motor for generating a steering assist power on the basis of a signal from the torque sensor, the steering assist power being transmitted through the ball screw mechanism to the steering mechanism, and an elastic member disposed at a portion supporting the ball screw nut, the elastic member being deformable in accordance with a degree of a received impact to absorb the impact.

Claim 7, as amended, recites an electrically drive power steering apparatus that includes a housing, a ball screw shaft extending within the housing and connected to a steering mechanism, an input shaft to which a steering force is inputted, an output shaft for receiving the steering force from the input shaft and outputting the steering force to the ball screw shaft, a torque sensor for detecting a torque acting in an axial direction to the ball screw shaft by receiving a rotational force from the motor, wherein an elastic member, which is deformable in accordance with a degree of an impact inputted from the side of the ball screw shaft to absorb the impact, is disposed on a support portion of the ball screw nut.

Embodiments of the present invention advantageously provide an elastic member, disposed on a support of a ball screw nut, that is deformed in accordance with a degree of a received input. If an excess torque is inputted to the elastic member, the elastic member transmits the torque while reducing damage of the elements in the torque transmission route. For example, as described in paragraph [0092] of the specification with reference to Fig. 7, if a traveling wheel of a vehicle collides with a paved step of the sidewalk in the vicinity of the neutral position where the rack stroke damper 333 does not function, the impact is transferred to the rack shaft 322. In such a case, the elastic member 335 torsionally deforms and can, thus, absorb the impact. Further, when the ball screw nut 329 and the rotor 323c relatively rotate through predetermined or larger angles with the torsional deformation of the elastic member 335, the notch 329e as a recessed portion of the elastic portion 335c and the protrusion 323e as a protrusion, which function as a displacement limiter, are brought into contact with each other, thus preventing a damage to the elastic member 335 by limiting a further torsional deformation of the elastic member 335.

Joshita discloses an electric power steering device of a vehicle that includes a pinion that rotates by steering operation, a rack engaged with the pinion, a rotary element screwed on the rack, a motor that drives the rotary element, the motor including an output element, and a torque limiter provided between the rotary element and the output element of the motor. The vehicle is steered by the longitudinal shifting of the rack due to the rotation of the pinion and steering assistance power is generated along the longitudinal direction of the rack by the rotation of the rotary element.

As shown in Fig. 5 of Joshita, torque limiter 50 is attached to a ball nut 63 and abuts rotor 8e. Torque limiter 50 is annular and connects the rotor 8e and the ball nut 63 so as to

rotate together by providing a frictional force based on the elastic force thereof in a normal torque transmission. When an excess torque is generated between the rotor 8e and the ball nut 63, the rotor 8e slips on the torque limiter 50 to limit a transmitted torque. Accordingly, the amount of deformation of the torque limiter 50 is almost constant. Joshita fails to teach or disclose, however, an elastic member deformed in accordance with a degree of a received impact to absorb the impact, as claimed in independent claims 1 and 7, as amended.

Applicant respectfully notes that in order for a claim to be anticipated, “every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim.” *Brown v. 3M*, 265 F.3d 1349, 1351 (Fed. Cir. 2001). In view of the above, Joshita fails to teach each limitation recited in independent claims 1 and 7, as amended, as required to support a rejection under §102. Thus, independent claims 1 and 7 are patentable over Joshita. Dependent claims are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

### **Information Disclosure Statement**

Applicant thanks the Examiner for considering the Information Disclosure Statements of April 30, 2004, February 10, 2005, and July 7, 2005. However, Applicant has not received an initialed PTO-1449 for the Information Disclosure Statements filed on September 19, 2005 and December 20, 2005. Accordingly, Applicant respectfully requests consideration and return of an initialed PTO-1449 for the Information Disclosure Statements filed on September 19, 2005 and December 20, 2005.

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 10122/005003).

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Respectfully submitted,

By 

Jonathan P. Osha  
Registration No.: 33,986  
OSHA · LIANG LLP  
1221 McKinney St., Suite 2800  
Houston, Texas 77010  
(713) 228-8600  
(713) 228-8778 (Fax)  
Attorney for Applicant

Attachments